

REMARKS

The Office Action of October 5, 2004 has been reviewed and the comments of the U.S. Patent and Trademark Office have been considered. According to the Examiner, Claims 1-16 stand objected to because of the following informalities: (i) claim 1 at line 5, recites "the chamber" which purportedly lacks antecedent basis; and (ii) claims 5-6, 8, 10-13 and 15-16 are allegedly in improper form under 37 C.F.R. § 1.75(c) because they depend on multiple dependent claims. *See* Detailed Action at page 2 ¶ 1. Claim 4 stands rejected under 35 U.S.C. § 112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. *See id.* at page 2 ¶ 3. Claim 9 stands rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 5,350,552 to Ebata et al. ("Ebata"). *See id.* at page 3 ¶ 5. Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Ebata in view of U.S. Patent No. 3,914,678 to Fletcher ("Fletcher"). *See id.* at pages 4-5 ¶ 7. Figures 4 and 7-9 are objected to because "they are clear." *See id.* at page 5 ¶ 8.

Claims 1-16 have been amended so as to overcome the various objections and rejections asserted by the Examiner in the Detailed Action. Newly added claim 17 is presented for the Examiner's review and consideration. Currently Pending are claims 1-17, which are believed to be in condition for allowance.

Objections to the Drawings

At page 5, paragraph 8 of the Detailed Action, The Examiner indicates that Figures 4 and 7-9 were objected to because "they were clear." No PTO-948 form was provided

with the Office Action Summary. Applicant respectfully request that the Examiner clarify the objection so as to permit Applicants to more fully respond to Examiner's objection.

Rejections for Lack of Antecedent Basis

Claim 1 stands objected to because, according to the Examiner, "the chamber," as recited in claim 1, line 5, lacks antecedent basis. Claim 1 has been amended to recite, an apparatus for forming electrophoresis gels, the apparatus including, among other features, "a container having a base and sides so as to define a chamber for receiving a plurality of gel cassettes," in order to provide antecedent basis for "the chamber," as now recited at line 6 of currently amended claim 1. Support for the amendment is provided in the application as originally filed at, for example, claim 1 and at page 9, lines 5-30. Applicants respectfully request withdrawal of the objection of claim 1.

The Examiner further objects to 5-6, 8, 10-13 and 15-16 under 37 C.F.R. § 1.75(c) as allegedly being in improper form because they depend on multiple dependent claims. Claims 5-6, 8, 10-13 and 15-16 have been amended to eliminate the multiple dependency. Accordingly, Applicants respectfully request withdrawal of the objection.

Rejection Under 35 U.S.C. § 112, second paragraph

Claim 4 stands rejected under 35 U.S.C. § 112, second paragraph, as purportedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regards as the invention. Specifically, the Examiner asserts that the phrase "preferably," as recited in claim 4, renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. Applicants have amended

claim 4 so as to delete the word “preferably.” Accordingly, Applicants respectfully request withdrawal of the rejection.

Rejections Under 35 U.S.C. § 102(b)

Claim 9 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Ebata.

Claim 9 has been amended to recite, “A process of forming an electrophoresis gel in a plastic cassette, the process including,” among other features, “(e) applying the initiated monomer solution to the plastic cassette; and (f) allowing the initiated monomer solution to polymerize in the plastic cassette, wherein steps (e) and (f) of the process are carried out in the apparatus of claim 1.”

As noted by the Examiner, Ebata does not disclose an apparatus of forming electrophoresis gel in a plastic container, or its method of use, in which the apparatus includes a baffle disposed over the inlet port. *See Detailed Action at pages 4-5 ¶ 7.* Claim 1 has now been amended to recite an apparatus for forming electrophoresis gels, the apparatus including, among other features, “a container having a base and sides so as to define a chamber . . . an inlet port . . . and a baffle positioned over the inlet port, such that, in use, when fluid passes through the inlet port into the chamber, the baffle substantially reduces fluid turbulence and vertical fluid movement in the vicinity of the inlet port during flow of the fluid into the chamber.” Because Ebata does not show or describe the process of amended claim 9, “wherein steps (e) and (f) of the process are carried out in the apparatus of claim 1,” Ebata does not show each and every element of claim 9, and thus does not anticipate the claim. Furthermore, Ebata does not render claim 9 obvious as Ebata provides no motivation to undertake the process set forth in amended claim 9. Applicants respectfully request withdrawal of the rejection.

Rejections Under 35 U.S.C. § 103(a)

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ebata in view Fletcher. Specifically, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a baffle for the inlet port to achieve a uniform flow and thereby obtain the present invention. Applicants respectfully traverse. Applicants submit that neither Ebata nor Fletcher teach or suggest a motivation to modify or combine the cited references as proposed by the Examiner, and thus, a *prima facie* case of obviousness cannot be established. *See MPEP § 2143.*

As noted by the Examiner, Ebata does not teach a baffle, nor does it specifically teach a baffle as claimed in amended claim 1. The Examiner proposes to modify or combine Ebata with Fletcher so as to cure the deficiency, and asserts that in light of the benefit disclosed by Fletcher, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a baffle for the inlet port to achieve a uniform flow and thereby obtain the present invention. *See Detailed Action at page 5 ¶ 7.* Applicants respectfully submit that any combination of Ebata and Fletcher is not suggested by the references themselves, but is instead suggested by Applicants' disclosure. In establishing a *prima facie* case of obviousness, an applicant's disclosure cannot be relied upon to provide the requisite teaching or suggestion for the claimed combination. *See MPEP § 2143* ("The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure." (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991)). There are three possible sources for a motivation to combine references: the nature

of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *Id.*

First, Ebata and Fletcher are not directed to the same problems to be solved. Specifically, Ebata relates to a method for preparing a polyacrylamide aqueous gel plate for use in electrophoresis, and, more particularly, to a method for preparing a large quantity of polyacrylamide aqueous gel plates with *homogeneous* mixture. *See Ebata* col. 1, lines 7-11. Unlike Ebata, Fletcher is directed to providing an electrophoretic sample placement system and process to distribute a sample evenly within a buffer flow path. *See Fletcher* col. 1, lines 56-59. Fletcher describes two screens of conductive material positioned across the area into which the sample is to be accurately placed. *Id.* col. 2, lines 1-3. The charge of the screens acts upon the components of the sample to physically move them through the screen layers at different depths corresponding to the relative characteristics of the components. *Id.*, col. 2, lines 5-9. The system of Fletcher is employed in and adapted for a continuous electrophoresis *separator* or fractionator. Accordingly, Ebata and Fletcher are directed to problems of a separate nature, and thus there is no common nature of a problem to be solved to provide the suggestion or motivation to combine the references as proposed by the Examiner.

Second, the teachings of Ebata and Fletcher conflict so as to weigh against any suggestion or motivation to combine the references. Based on the nature of their respective problems to be solved, Ebata teaches producing gel plates of homogeneous quality between the partition members. *See Ebata*, col. 6, lines 6-16. In contradistinction, Fletcher teaches to separate a sample into layers of various components for extraction. *See Fletcher*, col. 3, lines 51-63. In addition, the method of Ebata requires permitting the gel-forming solution to stand still for a

period of time to gelatinize. *See Ebata*, col. 4, lines 52-54. *Fletcher* teaches away from permitting a buffer solution to stand still and instead teaches an electrophoresis separator in which a buffered solution is continuously passed through a separation chamber and sedimentation is avoided. *See Fletcher* col. 2, lines 40-56.

Finally, there is nothing in the references cited to suggest the desirability of laminar flow in the gel-forming container and method of *Ebata*. *Fletcher* teaches laminar flow because the device of *Fletcher* uses a continuously passed buffered solution in which to carry and separate a sample, not to form a gel plate. There is nothing in *Ebata* itself to suggest the desirability of laminar flow upon introducing the gel-forming solution. The only suggestion for reducing fluid turbulence in an apparatus for forming electrophoresis gels comes from Applicants' own disclosure, which cannot be used in finding a suggestion or motivation for the purposes of a *prima facie* case of obviousness. "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." MPEP § 2143.01. Moreover, any contention that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill in the art' at the time the claimed invention was made because the references purportedly teach that all aspects of the claimed invention were individually known in the art, cannot stand to establish a *prima facie* case of obviousness because some objective reason to combine the teachings of the references is required. *See id.* at 2100-131.

Applicants respectfully submit that there is no motivation or suggestion to modify or combine the teachings of *Ebata* and *Fletcher* so as to reach the apparatus of amended claim 1. Accordingly, a *prima facie* case of obviousness cannot be established. *See MPEP §§ 2143 &*

2143.01 at 2100-129-130 ("Obviousness can only be established . . . where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.")

Applicants respectfully request withdrawal of the rejection. Claims 2-16 depend from claim 1 and should be allowed for at least the same reasons.

New Claims

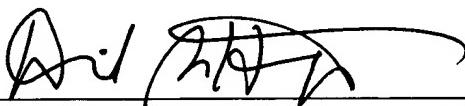
Presented for the Examiner's review and consideration is new independent claim 17. No new matter is believed to be fully supported by the application as originally filed, for example, at page 3, lines 7-14. Applicants respectfully request entry and early allowance.

CONCLUSION

In view of the foregoing, Applicants believe the amendments to the claims place the claims in a condition of allowance, and therefore respectfully request reconsideration and the timely allowance of pending claims 1-17. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is urged to contact Applicants' undersigned representative to expedite prosecution.

EXCEPT for issue fees payable under 37 C.F.R. 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. 1.136(a)(3).

Respectfully submitted,
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Dated: April 4, 2005
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